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Managing Operational Proactiveness to Facilitate Functional Area Alignment and Enhance Business Performance

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Abstract

The aim of this paper is to explore the role of operational proactiveness with respect to achieving functional alignment and enhancing business performance. Using data from the retail banking industry, we investigate how operational proactiveness impacts strategic alignment and business performance. Results show that the operational proactiveness contributes to business performance through enhanced strategic alignment. Additionally, with assistance from a panel of experts, outcomes of the study were subjected to a reality check in order to develop managerial guidelines for operationalizing the findings of this research.

Keywords: Proactiveness, strategic alignment, business performance, service management

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INTRODUCTION

In the era of demand surpassing supply, the operations function took a crucial role in strategic decision processes. In the 1960s, during the consumer and market orientated period, the marketing function began to take a leading role in strategic management. In the 1970s, however, when recessions and oil crises came, the finance department was considered as the most important function (Hill 1994). In this respect, during the supply-surplus periods, the operations function tended to take reactive stance in the strategic decision making process at top management levels.

Manufacturing firms whose operations functions took reactive postures lost their competency against their competitors (Skinner 1969; Wheelwright and Hayes 1985). When the operations function takes a reactive stance in organizational strategic decision making, this function cannot help but deal with various conflicting demands imposed on it from other functional areas. Furthermore, it cannot gain appropriate and useful resources to build its necessary capabilities. Under this circumstance, it will hardly get a chance to properly reflect its capability and requirements in the firm's strategic decision making. When this operations function is excluded from the strategic decision processes, operational activities might not be aligned closely with competitive strategy. In this vein, Wheelwright and Hayes (1985) emphasize that operations need to proactively participate in and steer the firm's strategic decision process to resolve strategic misalignment problems and achieve world-class competitiveness. Operations function, when it takes a proactive stance and a leading role in strategic decision processes, is expected to contribute effectively in achieving a world-class status through fostering its strategic alignment with competitive strategy.

The proactiveness concept has been utilized with operations taking different roles to explore performance implications of such various research topic as 'entrepreneurial orientation' (Poon, Aimuddin, and Junit 2006; Hughes and Morgan 2007; Kreiser and Davis 2009, not inclusive), 'environmental strategy' (Buysse and Verbeke 2003; Luo 2003), 'market orientation' (Sandberg and Hansen 2004; Hughes, Morgan, and Kouropalatis 2008), 'new product development strategy' (Droge, Calantone, and Harmancioglu 2008; Lindman, Scozzi, and Otero-Neira 2008), strategic orientation (Morgan and Strong 2003),

and 'manufacturing flexibility' (Kini 2002; Chang et al. 2005). However, performance implications of the proactiveness have rarely been empirically investigated within context of operations function.

Ward, Leong, and Boyer (1994) initially tried to find empirical evidence on how operational proactiveness impacts business performance. After their work, only a few research studies have looked into the operational proactiveness problem within a manufacturing industry context (Pake-Shields and Malhorta 2001; Chang et al. 2005; Gonza´lez-Bentio 2005). However, these research results might have some limitations in the application toward the service industry organizations because services organizations are intrinsically different from manufacturing organizations. In addition, the proactiveness problem has been rarely investigated with respect to service firm operations, although Goldstein and Ward (2004) have looked into the performance effects of operations' proactive participation within hospital context. Hence, it is necessary to investigate the impact of operational proactiveness upon strategic alignment and business performance within a service industry context, and this study intends to fill this research gap.

THEORETICAL BACKGROUND

Operational proactiveness and strategic alignment

Skinner (1969) asserted that the reactive posture of operations caused the misalignment between the manufacturing and competitive strategies. And this misalignment is one of key factor which makes American manufacturing firms to lose their competency. However, a firm can solve this misalignment problem by solidifying its operational function to proactively participate in its own strategic decision making processes (Hayes and Wheelwright 1985, Anderson, Schroeder, and Cleveland, 1991; Swamidass and Newell 1987; Hill 1994).

Operations function need to participate proactively in the strategic decision process to keep track of the top management's strategic decisions directions. And this proactive participation is helpful for top management and other functional departments to understand the capability and limitations of operations function. In this respect, operational proactiveness becomes an effective lever to reach the

achievement of the strategic alignment between competitive and functional level strategies (Papke-Shields and Malhotra 2001).

As well-known, the importance of operational proactiveness has been illustrated by Wheelwright and Hayes (1985)'s theoretical framework assuming four stage development of manufacturing function capability from 'internally neutral' stage to 'externally supportive' stage. A firm can reach the externally supportive (the fourth stage of world-class) level, if only manufacturing function proactively participates and leads its strategic decision process at the top. In an effort to adopt their idea to the analysis of service firm competitiveness, Chase and Hayes (1991) have developed a conceptual model that describes the operations function's development stage from the first stage, 'available for service' to the fourth stage, 'world class service delivery'. Also, as a precondition of reaching to the world-class service, their model emphasizes the proactive role of operations function in managing service organizations' strategic management.

In addition, referring to Chase and Hayes (1991)'s world-class service model, Roth and Van der Velde (1991) have devised, within the context of retail banking industry, service delivery system capability development model that depicts the four stages 'revolving doors', 'minimum daily requirements', 'gateways', 'golden handcuffs'. 'Golden handcuffs' status (world-class level capability), requires operations functions to proactively retain and attract customers while it is highly integrated with marketing. Furthermore, Rhee and Mehra (2006) empirically showed that operational proactiveness moderates the integration effects of operations and marketing functions upon business performance.

The strategic activities of operations can be aligned closely to the competitive strategy when the function has a proactive stance because operations can persuade the top management to reflect upon its opinions in the strategic decisions. Hence, we propose the first hypothesis of this study as follows:

> **H 1**: Proactive participation of the operations function in strategic decision processes will lead to the close alignment of competitive strategy and strategic activities of other functional areas.

Strategic alignment and business performance

The strategic alignment has been emphasized as one of the key concepts within the operations strategy context (Voss 1995). In reality, the alignment (or the fit) originated from the contingency theory. Construction of definitions and development of corresponding measurement tools are crucial to the successful implementation of strategic alignment research. Venkatraman (1989) contributes to the development of the various strategic alignment concepts and the provision of necessary measurement tools to analyze the conceptual frameworks.

In the operations strategy area, the strategic alignment can be conceptualized from external and internal perspectives (Skinner 1969). Internal alignment means the congruence between tasks, policies, and practices within operations functions. External alignment represents the fitness between operations strategy and organizational strategies such as competitive and corporate strategies. This study attempts to look into some strategic issues, particularly, the external fit of strategic activities of operations with the competitive strategy. The achievement of the strategic alignment of operations with competitive strategy has been regarded as crucial to the improvement of business performance (Fine and Hax 1985; Kotha and Orne 1989; Gupta and Lionel 1998; Pake-Shields and Malhotra 2001; Sun and Hong 2002).

In an effort to test performance implications of the strategic alignment between operations function and competitive strategy, we posit our second hypothesis.

> **H 2:** The strategic alignment between the competitive strategy and strategic activities of operations function will positively impact upon business performance.

Operational Proactiveness and business performance

Ward, Leong, and Boyer (1994) have examined how operational proactiveness affects business performance within a manufacturing context. However, their research only tests if proactiveness has a significant relationship with business performance. They disregard the roles of operational proactiveness in achieving strategic

alignment between functional level strategies and competitive strategy. In an effort to complement Ward, Leong, and Boyer's (1994) study, Pake-Shields and Malhotra (2001) have investigated how the operational proactiveness impacts strategic alignment and business performance by using a path analytic method. Their study has shown that operational proactiveness takes an important role in enhancing the strategic alignment and business performance.

Pake-Shields and Malhotra's (2001) study implies that for a systematic analysis, the performance effects of the operational proactiveness need to be divided into direct and indirect categories. The direct effects of the operational proactiveness can be analyzed by looking into how the proactiveness itself affects business performance. In addition, the indirect effect of operational proactiveness can be examined by checking how contributions of functional activities to business performance are changed by operational proactiveness.

In addition, Gonza´lez-Bentio (2005) examined the effect of manufacturing proactivity on business performance. In this study, the manufacturing proactivity is understood as the tendency of a company to implement the most modern and advanced production management practices. These advanced production management practices (e.g., employee participation, employee training and development, collaboration with suppliers, continuous improvement and TQM) are shown to have positive effect on financial and operational performances.

In similar vein, Chang et al. (2005) explored the effects of manufacturing proactiveness on manufacturing flexibility. The results of the study show that the manufacturing proactiveness is substantially related with manufacturing flexibility. In yet another study of Chinese firms, Qi, Sum, ad Zhao (2009) discovered that proactiveness of operations, marketing, and finance functions in the strategy formulation process leads to improvement in such critical success factors as cost and quality.

In an effort to apply the notion of proactiveness to service areas, Goldstein and Ward (2004) examined how physicians' involvement in hospital strategic decisions affects the performance of hospitals. Analysis results indicate that when physicians (who are medical service providers) participate proactively in strategic decision making, hospital performance is significantly improved.

Recently, the proactiveness concept tends to be applied to the

examination of product development processes which are now deemed a crucial part of the operations management area. Sandberg (2007) analyzes how customer-related proactiveness is related with the radical innovation development process. This author found that the stage of product development process influences the degree of needed proactiveness. In addition, Droge, Calantone, and Harmancioglu (2008) explored if proactive strategic orientation, along with three other success factors of organic organizational structure, innovativeness, and market intelligence, impacts new product success. The authors concluded that impact of strategic proactiveness is moderated by a business's environmental turbulence. Furthermore, Lindman, Scozzi, and Otero-Neira (2008) investigated the impact of the proactiveness at the design stage of new products within the context of low-tech, small and medium sized firms. This study found that operational proactiveness during the design process enhances new product development and subsequent performance.

All above mentioned research writings lead us to test the possible expected performance effects of the operational proactiveness. Hence, we posit hypothesis 3 as follows:

> **H 3:** The operational proactiveness will positively impact business performance.

MEASUREMENT AND ANALYSIS

From a list of the Top 1000 U.S. banks in the POLK world class bank directory, 530 banks whose retail banking manager's name and title were available were selected as a sampling frame. After constructing and pilot testing the questionnaires, a mail survey was implemented following the total design method (TDM) mail survey process (Dillman 1978).

A total of 530 research packages were prepared and sent to each key informant. We received responses from 81 retail banks yielding a response rate of 15.6 percent. The characteristics of sample respondents are shown in table 1. The positions of informants concentrate on high ranks such as the vice president and president positions. In this, they might be in a better position to understand overall strategic management of their banks including operations

Table1. Characteristics of sample respondents

Profile Characteristics	Distribution of respondents
Position titles of respondents	
President	7.3%
Executive vice president	30.5%
Senior vice president	52.4%
Head of Banking	4.9%
Others	4.9
Retail banking unit size	
Less than $ 100 million	8.6%
$ 100 million – $1 billion	48.1%
$ 1-3 billion	25.9%
$ 3-10 billion	8.6%
More than $ 10 billion	8.6%
Primary geographic served market	
Local market	59.8%
State market	17.1%
Regional market	20.7%
National market	2.4%
Revenue structure of retail banks	
Interest	60.4%
Deposit service charges	19.7%
Loan fees	11.7%
Other	8.2%
Competitive strategic types	
Defender	30.5%
Prospector	29.3%
Analyzer	40.2%

and marketing strategic issues. In addition, 60 percents of respondents' banks primarily serve local market and most of their revenue comes from interest income. Lastly, none of them marked themselves as a reactor. And 31 percent of them are reported as Defender, 29 percent of them are as Prospector, and 40 percent of them are as Analyzer.

In an effort to check whether a response-bias was present, we used a chi-square goodness-of-fit test. The test statistic failed to reject the null hypothesis of equal distribution at 0.10 to confirm the absence of a non-response bias.

Survey instrument development

To represent competitive strategy, we used four paragraphs that describe the strategic types of Miles and Snow typology (1978). To avoid any response bias, the strategic types were labeled as Type 1, Type 2, Type 3, and Type 4 rather than defender, prospector, analyzer, and reactor respectively (see, appendix A). This approach has been used in previous banking industry strategic research (McDaniel and Kolari 1987; James and Hatten 1995).

In an effort to help audience understand the nature of each strategy category, we describe the nature and characteristics of defender, prospector, and analyzer, and reactor. Prospectors are organizations which have high capacity to find and exploit new product and market opportunities. They place high emphasis on the development and maintenance of the capacity to monitor a wide range of environmental conditions, trends, and events. Marketing and R&D functions are dominant in their organization.

Defenders are organizations which have narrow and stable product-market domain. They place high emphasis on improving operations functions. Technological efficiency is central to organizational performance, and becomes the primary sources of their success. The operations managers become dominant coalition member, but marketing managers rank well blow them in terms of influence.

Analyzers are organizations which are hybrid combination of the prospector and defender type. Their primary attention is paid to the question of how to locate and exploit new product and market opportunity while simultaneously maintaining a stable core of products and markets. Marketing and applied research managers become most influential member of dominant coalition. And operations manager is followed them closely. They try to attain both effective and efficiency.

Reactors are organizations which often identify changes and uncertainty in their environments but are not able to respond effectively. They are lack of capability to seek consistently a strategic pattern to respond to the changing environment.

Operations strategy was operationalized through structural and infrastructural strategic choices. The structural strategic activities are concerned with the brick and mortar decisions while the

infrastructural strategic elements are related to decisions affecting people and systems. We selected 16 strategic items as the operations strategic activities which are composed of nine structural and seven infrastructural decision factors.

Marketing strategy was represented by some strategic elements that are crucial to market opportunity identification and the appropriate products provision. In order to examine market and product related issues in strategic management, 12 marketing strategic activity items were chosen from bank marketing studies (McDaniel and Kolari 1987; MeKee et al. 1989).

All items are checked on a seven-point Likert scale, ranging from the "lowest" to the "highest". For the validity and refinement of our research instrument, we used an exploratory factor analysis as Churchill (1979) recommended. Four operational strategic factors and three marketing strategic factors were extracted and they are shown in table 2.

All loading values are considered significant because all of them are greater than 0.50. For the validity (/reliability) test, we look into Cronbach's alphas. Generally, 0.60 is considered as lower limit for Cronbach's alpha for the exploratory factor analysis (Hair et a1. 2010). All alpah values are greater than o.60 with maximum value of 0.88, except 0.55 (very close to 0.60) of Facility Management. In this respect, internal consistency and validity of extracted factors seems to be good. Additionally, for each of extracted factors, we integrate individual measurement items by calculating arithmetic mean values.

As appendix B shows you, operational proactiveness is measured by the degree of proactive participation of operations function in strategic decision making and cross-functional discussions in relation to key strategic activities. In order to capture the proactive participation of operations function in strategic management processes, respondents were asked to indicate "the extent with which your operations manager participates in strategic planning at the Retail Banking Units (RBU) level on a seven-point Likert scale (with 1 as 'no involvement' and 7 as 'total involvement'). In addition, for the assessment of cross-functional discussions, respondents were asked to indicate the degree of their involvement in the cross-functional team meetings to discuss strategic issues from three key strategic areas such as product and market decisions, long-term capital investment decisions, and growth strategy-related decisions

Table 2. Extraction of strategic activities of operations and marketing functions

Factors	Items	Loadings	Cronbach
1. Encounter Mgt.	Educating & retaining employees	0.80	
	Quality control	0.79	
	Customer education	0.75	0.88
	Incres. Financial incentives	0.75	
	Establishing teamwork	0.71	
	Job-enlargement	0.64	
	Enhancing employee training	0.55	
2. Integration Management	Cooperation with soft-ware suppliers	0.82	
	Information system management	0.71	0.69
	Incres. MIS staff size	0.70	
	Investment in home-banking technology	0.52	
3. Demand management	Limited service branches	0.88	0.62
	Managing demand	0.62	
4. Facility Management	Increasing in ATM investment	0.72	
	Expansion of full service branches	0.70	0.55
	Renovation of branches	0.54	
5. Product Management	Customizing product/service	0.84	
	New product development	0.81	
	Price analysis for products	0.77	0.83
	Product improvement and R & D	0.69	
	Customer information system	0.64	
	Market research	0.51	
6. Promotion Management	Direct mail advertising	0.89	
	Mass media advertising	0.69	0.74
	Sales promotion	0.63	
7. Sales Management	Point of sale technology	0.83	
	Branch as sales center	0.67	0.67
	Location convenience	0.56	

of RBU (on a seven-point Likert scale with 1 as 'rarely' and 7 as 'frequently')

Business performance is expressed through such four performance indicators as 'net interest margin', 'fee income', 'return on asset (ROA)', and return on equity (ROE)'. ROA and ROE are chosen to look into the profitability of sampled banks. In similar vein, this study selects net interest margin and fee income to investigate the banks' income growth.

Table 3. Business Performance

Items of performance index	Loadings	Cronbach's alpha
Return on equity (ROE)	0.89	
Return on asset (ROA)	0.85	0.81
Fee income	0.70	
Net interest margin	0.62	

Net interest margin represents a measure of the difference between the interest income earned by banks and interest expense paid out to their lenders, relative to the amount of interest-earning assets. It is similar to gross margin of non-financial companies. And fee income denotes revenue gained by banks from account-related charges to customers (Wikipedia 2013). In relation to revenue structure, as table 1 shows, over 90% of revenue of sampled banks comes from the interest and the fee incomes. In this respect, the selection of net interest margin and fee income for the examination of retail banks' income growth seems to be very appropriate.

As Venkatraman and Ramanujam (1987) suggests, we asked respondents for the measurement of performance to evaluate his or her bank's relative performance through comparison with the bank's closest competitor. They were requested to indicate their banks' achievement by circling the appropriate number on a seven-point Likert scale, ranging from the 'lowest' to the 'highest' as shown in appendix C. In addition, exploratory factor analysis results are shown in table 3. We report measurement items, factor loading values, and Cronbach's alpha values in there.

Analytical tools

A major goal of this study is to investigate how operational proactiveness affects the retail bank's strategic management and business performance. This research goal is reached through exploring how proactiveness impacts strategic alignment and its association with business performance.

We assumed that operational proactiveness would enhance the quality of strategic alignment between competitive strategy and strategic activities of operations and marketing. In an effort to test this hypothesis, we used the discriminant analysis method.

The discrimiant analysis that regards functional (operations and marketing) strategic activities as independent variables classifies

observations (retail banks) into such strategic groups as prospector, analyzer, and defender and reactor. In addition, the hit ratio, a statistic from the results of this discriminant analysis, shows how exactly the classified groups are matched with the actual strategic groups. On the other hand, the actual strategic groups are identified by asking respondents to choose one of the descriptions that most closely fit their strategic types which are shown in appendix A.

Utilizing the hit ratio, we can examine whether the degree of congruence between the classified strategic group (which is derived indirectly on the basis of operations and marketing activities), and the actual strategic group (which is chosen directly by bank management (respondents)) is significantly different between the high and the low operational proactiveness groups. In this respect, this discriminant can test appropriately hypothesis 1 through assessing whether the operational proactiveness enhances significantly the quality of the strategic alignment or not.

As stated earlier, operational proactiveness is expected to enhance business performance through the improvement of strategic alignment quality. In this paper, we represent the strategic alignment of operations and marketing activities with competitive strategy through interaction effects as Venkatraman (1989) suggested. To analyze this assumed contribution of operational proactiveness toward the attainment of the strategic alignment, we perform a discriminant analysis. Through examining hit ratio statistics from discriminant analysis, we can decide whether operational proactiveness significantly affects the degree of attained strategic alignment or not. For examining performance implications of the strategic alignment between competitive strategy and activities of operations functions, we utilize the correlation analysis. In addition, the direct performance effects of the operational proactiveness are assessed through using the t-statistics test. This t-test method is useful in investigating if the business performance is significantly different between the high and low operational proactiveness groups. In this respect, this test can be used to check whether or not the direct impact of the operational proactiveness upon business performance is significant.

Analysis and results

Sampling and data arrangement. Through this research, we

attempted to look into how operational proactiveness impacts strategic management effectiveness and business performance. For this, we divided the research sample into high and low proactiveness groups and evaluated if the quality level and performance effects of strategic alignment are significantly different between these two groups.

In an effort to make the two equal sub-samples from the total sample size of 81, we have sorted the total sample by descending order on the basis of the value of operational proactiveness variable. The sample was divided into high and low groups by choosing the 41st sample as the cutting point. Thus, the resulting two sub-groups ended with 40 samples each. However, unexpectedly, the seven samples from the 36th to the 42nd have the same proactiveness variable value of 5.25. In order to represent more clearly the distinctive characteristics of the high and the low proactiveness groups, we have removed the seven samples located in the middle. After seven values are taken out, 35 samples have values greater than or equal to 5.50 and they are each classified as a high proactiveness group. On the contrary, 39 samples have values less than or equal to 5.00, and thus they are arranged into the low proactiveness group.

Proactiveness and strategic alignment. In this study, the operational proactiveness is assumed to contribute to the achievement of the strategic alignment between competitive strategy and strategic activities of operations and marketing functions. In an effort to test this hypothesis, we utilized a hit ratio statistic derived by the discriminant analysis. As mentioned earlier, this hit ratio represents the degree of the congruency between the strategic types that were predicted by the operations and marketing activities and those types that were actually chosen by respondents (bank management). In other words, the hit ratio represents how the strategic groups are correctly classified by operations and marketing activities. This statistic implies how these two functions' activities are supportive and congruent to the competitive strategy.

When the hit ratio is shown to be significantly different between the high and the low operational proactiveness groups, we can infer that the operational proactiveness significantly affects the strategic alignment. The hit ratio is helpful in checking if the operational proactiveness significantly impacts the degree of correct

Table 4-1. High proactiveness group (greater than or equal to 5.50)

Classification / Strategic types	Defender	Prospector	Analyzer
Defender	8 (66.70%)	3 (25.00%)	1 (8.30%)
Prospector	0 (0.00%)	10 (83.30%)	2 (16.70%)
Analyzer	2 (18.20%)	2 (18.20%)	7 (63.60%)

Hit ratio = 71.4 %

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	0.843	76.4	76.4	0.675
2	0.260	23.6	100.0	0.454
Test of Functions	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	0.430	24.446	14	0.040

Box's M = 69.694 (Sig. 0.801)

Table 4-2. Low proactiveness group (less than or equal to 5.00)

Classification / Strategic types	Defender	Prospector	Analyzer
Defender	6 (54.50%)	1 (9.10%)	4 (36.40%)
Prospector	2 (22.20%)	5 (55.60%)	2 (22.20%)
Analyzer	1 (5.30%)	4 (21.10%)	14 (73.70%)

Hit ratio = 64.4%

Function	Eigenvalue	Percent of Variance	Cummulative percent	Canonical Correlation
1	0.428	58.0	58.0	0.547
2	0.310	42.0	100.0	0.487
Test of Functions	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	0.534	20.680	14	0.110

Box's M = 99.226 (Sig. 0.182)

classification of strategic groups on the basis of operations and marketing activities. In conclusion, through the use this statistic, we can assess how strategic alignment is affected by the level of the operational proactiveness.

As tables 4-1 and 4-2 show, hit ratios are 71.4 percent in the high proactiveness group and 64.1 percent in the low proactiveness group. Furthermore, when the analysis results are examined for

each of the strategic types, the hit ratio looks more significantly different between the high and low proactiveness groups. For instance, in the high proactiveness group, the prospectors were at 83.3 percent but the defenders and the analyzers were at 66.7 and 63.6 percent of correct classification. On the contrary, in the low proactiveness group, the analyzers attained 73.7 percent but the defenders and prospectors were at 54.5 and 55.6 percent of correct classification. Here, we conclude that operational proactiveness significantly impacts the attainment of the strategic alignment between the competitive strategy and key activities of operations and marketing functions. Thus, we find supporting evidence for the acceptance of hypothesis 1.

The first canonical variable (canonical discriminate functions) accounts for 76.4 percent of total dispersion in the case of the high proactiveness group, and explains for 58 percent of the total variation in the case of the low proactiveness group. Additionally, in order to test the significance of the discriminant function, we utilized Wilks' lambda value. Functions labeled 1 through 2 (in tables 4-1 and 4-2) were tested to check if the means of the two functions were equal across the three groups. The p-value (i.e., observed Sig.) is 0.04 for the high group and 0.110 for the low group. When they are compared with the conventional significance level of 0.05, the lambda value of the low group seems to be insufficient. This implies that the discriminatory power of the functions might be slightly weak in case of the low group. On the other hand, in an effort to look into the basic premise about whether or not the equality of the covariance matrices of the independent variables are kept across groups, we examined Box's M test. The test values appears to be 69.694 (Sig. 0.801) and 99.226 (Sig. 0.182) for the high and low groups respectively. This test result supports the equality covariance assumption and also implies that the assumption of multivariate normality is kept well (see, SPSS Base 10.0 Applications Guide, p. 264).

Association of the business performance and strategic alignment. Through testing hypothesis 1, we have found that high operational proactiveness is helpful to the achievement of a high quality alignment between operations strategy and competitive strategy. In table 5, that presents the performance effects of the strategic alignment, we find that performance effects of the strategic

Table 5. The performance effects of the strategic alignment

Interaction terms / Performance	Encounter x Strategy	Demand x Strategy	Facility x Strategy	Integration x Strategy	Product x Strategy
Profit	0.419* (0.000)	0.245* (0.036)	0.295* (0.001)	0.400* (0.000)	0.412* (0.000)

* The strength of the association between strategic alignment and performance is measured by correlation coefficients, and p-values of these coefficients are represented in the parenthesis.

Table 6. Performance difference between the high and the low proactiveness groups

Tests / Assumption		Levene's test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	T	df	Sig.	Mean Difference
Profit	Equal Variances assumed	1.246	0.268	2.825	72	0.006	0.6391
	Equal Variances not assumed			2.860	71.018	0.006	0.6391

* Mean values of the high and the low proactiveness groups are 5.42 and 4.78.

alignment are significant at 0.01 level for four of the five interaction terms such as "Encounter and Strategy", "Facility and Strategy", "Integration and Strategy", and "Product and Strategy". The remaining interaction term, "Demand and Strategy" is significant at 0.05 level. On the basis of the test results, we conclude that strategic alignment positively affects business performance. Thus, the hypothesis 2 is supported.

Relationship between operational proactiveness and performance. We conducted a t-test to look into whether or not the business performance is directly affected by operational proactiveness. Our t-test results in table 6 show that the mean difference between the high and low proactiveness groups is 0.6931 and it is significant at 0.006 level. On the basis of the analysis result, we believe with

certainty that operational proactiveness significantly impacts the level of performance achievement among the two aforementioned groups. In this respect, we conclude that hypothesis 3 is supported.

DISCUSSION, IMPLICATION, AND LIMITATIONS

Discussion and Implications

In the first phase of analysis, the hit ratio statistic was utilized to examine how operational proactiveness impacts upon the achievement of the strategic alignment between competitive strategy, and operations and marketing activities. This statistic indicates how the actual strategic group is correctly matched with the strategic group derived on the basis of key activities of operations and marketing. Our analysis shows that operational proactiveness takes an important role in achieving the strategic alignment between competitive strategy and functional level strategic activities. It is understandable that operations function can effectively lead (or support) strategic decision processes at the top management level only if this function takes a proactive stance as asserted earlier by Wheelwright and Hayes (1985). Next, we discuss the analysis for various bank groups.

In the prospector group, the hit ratio statistic of the high proactiveness group is nearly 30 percent higher than that of the low proactiveness group. This hit ratio difference implies that the congruency of strategic activities of operations and marketing with competitive strategy is significantly different between the high and low groups. In this vein, operational proactiveness can be regarded as a crucial factor for the achievement of the strategic alignment. Generally, prospectors tend to introduce innovation continuously into their markets and products to keep their competitive edge (Miles et al. 1978). Speedy understanding of market requirements and customer needs is crucial to faster developing of new products. In a business organization, marketing function is in charge of scanning market environment changes and collecting product related information. Operations function should be able to accommodate market or customer requirements appropriately in the product design process to provide high quality products to customers. In this respect, operations and marketing functions need to cooperate.

Next, for the defender group, the hit ratio statistic is 12 percent higher in the high proactiveness group than in the low proactiveness group. This result can be interpreted as operational proactiveness being a key factor in the attainment of the strategic alignment of this strategic group. However, in contrast to the prospector group, the defenders should be able to attain competitiveness through enhancing efficiency and service quality in their stable market (Miles et al. 1978). For this, operational function needs to take a leadership role in making organizational strategic decisions, particularly structural and infra-structural decisions. These strategic decisions are crucial to the improvement of efficiency and service quality of retail banks. In this respect, for the success of retail banks, the operations function needs to keep a proactive stance when it participates in strategic decision making.

Unlike the two above-mentioned strategic groups, analyzer group keeps a 'balance' between innovation and efficiency as a critical competitive factor. In this vein, this strategic group is considered a hybrid-type strategic group which tries to get benefits of both the prospector and the defender groups. Interestingly, in the analyzer group, strategic alignment is effectively achieved when operational proactiveness is kept to be somewhat lower or at a medium level. The hit ratio statistic is 10 percent higher in the low proactiveness group than in the high proactiveness group. This implies that for the analyzer group, operations function should be careful not to be as proactive as dominating marketing and other functions.

Hence, we conclude that for the prospector who emphasizes innovative differentiation and the defender who seeks to gain efficiency as a competitive edge, keeping a high operational proactiveness is necessary to achieve strategic alignment. On the contrary, for the analyzer who emphasizes strategic balance, keeping a low or medium level of operational proactiveness seems to help achieve strategic alignment.

In the second phase of analysis, we examined the assumed relationship of the strategic alignment and business performance. The strategic alignment represented by the interactive relationships between strategic activities of operations area and competitive strategy, appears to significantly impact business performance. To complete the last phase of analysis, we examined how operational proactiveness impacts business performance. The analysis results show that business performance has significantly different changes

according to operational proactiveness. In this respect, operations function should be able to keep proactive stance when it participates in strategic decision making.

With this information, it is clearly understandable that proactive participation of operations in the strategic decisions processes is important for the achievement of the strategic alignment between competitive strategy and functional level strategies. An earlier study by Rhee and Mehra (2006) showed that the functional proactiveness is crucial to the integration of service operations and marketing. In this respect, we have recognized that proactiveness is helpful not only to the attainment of vertical alignment between competitive strategy and functional level strategy but also to the horizontal integration of functional areas.

Research findings and managerial implications. To assess the real world contributions of our research findings, we subjected the outcome of this study to a reality check. Towards this objective, a panel of three senior executives from large banks was formed to reflect on the study findings. Each of these panel members had over twenty years of banking experience, had college degree along with professional banking credentials.

First, we shared the research objectives and results with each member of the expert panel. Second, they were asked to reflect on our findings, and third, to give us some managerial guidelines for operationalizing findings of the study. Their feedback is presented next.

In regard to the first step, we explained to each member as to how the study was conducted, and what was found as the outcome of this research. Except for minor comments and observations, each member was in agreement with our reflections on the findings of the study. In regard to management implications, each executive gave us their detailed feedback. This feedback from all members was merged and shared with all members of the panel for a final check. This effort resulted in the following seven-point guidelines:

1. Senior managers from the key functional areas must assess the unique market dynamics for their bank, and agree on the relevant competitive environment as well as banks' response.
2. Each functional area manager must appraise the appropriate personnel on their bank's market position and decide on the

level operational proactiveness.
3. A cross-functional team should be formed and sufficiently trained in multi-discipline skills to coordinate functional activities.
4. Guidelines must be developed to address the alignment issues (how much, when, where etc) between functional areas to enhance business performance.
5. Based on key performance indicators (KPIs) for the bank, a performance measurement system should be in place for appropriate actions and improvements.
6. When necessary, continued training to enhance personnel skills should be undertaken due to shifting market dynamics.
7. Top management must continuously stay involved in every step to assure desired results.

Contributions and Limitations

This study was an attempt to investigate the interrelationship between operational proactiveness, strategic alignment, and business performance within retail banking industry context. Hence this paper contributes to the exploration of the strategic role of the operational proactiveness.

As you know well, the importance of proactive stance of operations function was asserted in relation to solving the missing link problems (Skinner 1969) and to attaining world-class competitiveness (Wheelwright and Hayes 1985). We have added to the provision of empirical evidence that the proactive stance of operation function is crucial to attaining strategic fit between competitive strategy and strategic activities of operational function within context of retail banking industry.

This research attempted to measure the strategic alignment of competitive strategy and functional level strategies by using the hit ratio statistic from the discriminant analysis rather than by asking respondents to indicate their banks' achieved alignment between relevant strategies. In this, we have extended the usage of discriminant analysis to the assessment of the strategic fit. Additionally, we contribute to the application of Miles and Snow's theory in strategic management of retail banking operations. Lastly, we have offered empirical evidence that the strategic fit between operations functions with other related strategic areas is beneficial

to the enhancement of business performance.

However, as in any strategic management study, this study has limitations. First, it should be noted that our study's sampling frame is of the 1000 largest U.S. retail banks. Thus, the small and medium-size banks are excluded. This research is based upon a spontaneous collection of data. For example, respondents were not asked to provide their information for a specific time period.

In addition, we might have some problems of single informant method. In particular, the respondents might not be ones who best understand strategic activities of operations and marketing, and competitive strategies. Furthermore, our perceptual assessment of business performance is good to obtain data in the required format but it might have some limitation in reducing the possibility of overrating performance (Venkatraman and Ramanujam 1987).

In spite of our best efforts, the response rate for this empirical research could not be raised above sixteen percent. Even though this is a respectable response rate, a higher rate may have been more supportive of our findings. Additionally, due to the timing of our study, the recent crisis in the global financial sector is not reflected in the research analysis. We hope that future research studies will explore these limitations, and extend findings from this paper to other service industries.

Appendix A: Competitive strategy

In this section, we are interested in your retail banking unit's adaptive process toward competitive environments. Please choose one of the following descriptions that most closely fit your strategic orientations compared with other retail banking units' orientations in the industry. (Please note that none of the types listed below is inherently good or bad).

[ ] Type 1: We've attempted to locate and maintain a secure niche in relatively stable products or service area. We've tended to offer more limited ranges of products or services than our competitors, and we've tried to protect our domain by offering higher quality and superior services. We may not be at the forefront of development in the industry but have tried to be the best performer in our chosen market.

[ ] Type 2: We've tended to operate within a broad product-market domain that undergoes periodic redefinition. We've tried to be 'first in' with new products and market areas even if not all of these efforts lead to high profits. We've attempted to respond quickly to new market opportunity, and these responses often led us to a new round of competitive actions. However, we may not maintain market strength on all of the areas we enter.

[ ] Type 3: We've attempted to maintain a stable, limited line of products or services, but at the same time have tried to move out quickly to follow a carefully selected set of the more promising new developments in the industry. We are seldom 'first in' with new products or services but by carefully monitoring the actions of major competitors in areas compatible with our stable product-market base we try to be 'second in' with more cost-efficient product or services.

[ ] Type 4: We cannot keep a consistent product-market strategic orientation. We have not been able to be as aggressive

in maintaining established products and markets as have our competitors. Furthermore, we have not been able to take as many risks as our competitors have. We have been forced to respond to environmental pressures.

Appendix B: Proactiveness of Operations function

1. Please indicate by circling the appropriate number the extent with which your operations managers participate in strategic planning at the retail banking unit level using the following scale.

No involvement **Total involvement**

1 2 3 4 5 6 7

2. Please indicate by circling the appropriate number the extent the following decisions are based on participative, cross functional discussions.

	Rarely						**Frequently**
(1) Product and market decisions concerning operations	**1**	**2**	**3**	**4**	**5**	**6**	**7**
(2) Long-term capital investment decisions	**1**	**2**	**3**	**4**	**5**	**6**	**7**
(3) Decisions related to changes in the retail banking unit's growth strategies	**1**	**2**	**3**	**4**	**5**	**6**	**7**

Appendix C: Performance Measurement

Listed below are performance measures which are considered to be important for strategic management. Compared to your closest competitors, please indicate the level of achievement that your retail banking unit has attained. Please indicate your response by circling the appropriate number.

	Lowest						**Highest**
1. Return on asset (ROA)	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2. Return on equity (ROE)	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3. Net interest margin	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. Fee income	**1**	**2**	**3**	**4**	**5**	**6**	**7**

REFERENCES

Anderson, J. C., R. G. Schroeder and G. Cleveland (1991) "The process of manufacturing strategy: some empirical observations and conclusions", *International Journal of Operations & Production Management*, Vol. 11, No. 3, pp. 86-110.

Buysse, K. and A. Verbeke (2003), "Proactive environmental strategies: A stakeholder management perspective", *Strategic Management Journal*, Vol.24, No.5, pp.453-470.

Chang, S., R. Lin, J. Chen and L. Huang (2005), "Manufacturing flexibility and manufacturing proactiveness: Empirical evidence from the motherboard industry", *Industrial Management and Data Systems*, Vol. 105, No.8, pp.1115-1132.

Churchill, G. A. (1979), "A paradigm for developing better measures of marketing constructs", *Journal of Marketing Research*, Vol. 16, pp.64-73.

Dillman, D. A. (1978), Mail and telephone surveys: the total design method, *A Wiley Inter-science Publications*, New York, NY.

Droge, C., R. Calantone and N. Harmancioglu (2008), "New product success: Is it really controllable by managers in highly turbulent environments?", *The Journal of Product Innovation Management,* Vol.25, No.3, p.272.

Fine, C. H. and A. C. Hax (1985), "Manufacturing strategy: a methodology and an illustration", *Interfaces*, Vol. 15, No. 6, pp.28-46.

Goldstein, S. M. and P. T. Ward (2004) "Performance effects of physicians' involvement in hospital strategic decisions", *Journal of Service Research*, Vol.6, No.4, pp.361-372.

Gonza´lez-Bentio, J. (2005), "A study of the effect of manufacturing proactivity on business performance", *International Journal of Operations & Production Management*, Vol.25, No.3, pp.222-241.

Gupta, Y. P. and S. C. Lionel (1998), "Exploring linkages between manufacturing strategy, business strategy, and organizational strategy", *Production and Operations Management*, Vol. 7, No. 3, pp.243-264.

Hair, J. F., W. C. Black, B. J. Babin and R. E. Anderson (2010), Multivariate Data Analysis, 7th edition, Pearson Education, Inc., Upper Saddle River, New Jersey, 07458.

Hill, T. (1994), Manufacturing Strategy: Text and cases, *Irwin/McGraw-Hill Companies, Inc.*, Boston, MA.

Hughes, M. and R. E. Morgan (2007), "Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth", *Industrial Marketing Management*, Vol. 36, No.5, p.651.

Hughes, M., R. E. Morgan and Y. Kouropalatis (2008), "Market knowledge diffusion and business performance", *European Journal of Marketing*, Vol. 42, No.11/12, pp.1372-1395.

James, W. L. and K. J. Hatten (1995), "Evaluating the performance effects of Miles and Snow's strategic archetypes in banking, 1983 to 1987: big or small?", *Journal of Business Research*, Vol. 31, pp. 145-154.

Qi, Y., C-C. Sum, and X. Zhao (2009), "Simultaneous effects of functional involvement and improvement programs on manufacturing and financial performance in Chinese firms", International journal of operations & production management, Vol.29, No.6, pp.636-662.

Kini, R. B. (2002), "IT in manufacturing for performance: The challenge for Thai Manufacturers", *Information Management & Computer Security*, Vol. 10, No.1, pp.41-48.

Kotha, S. and D. Orne (1989), "Generic manufacturing strategies: a conceptual synthesis", *Strategic Management Journal*, Vol. 10, pp. 211-231.

Kreiser, P., and J. Davis (2009), "A revised conceptual model of the firm-level entrepreneurial process", *Journal of Small Business Strategy*, Vol.20, No.1, pp.1-18.

Lindman, M., B. Scozzi and C. Otero-Neira (2008), "Low-tech, small- and medium-sized enterprises and the practice of new product development: An international comparison", *European Business Review*, Vol.20, No.1, pp.51-72.

Luo, Y. (2003), "Industrial dynamics and managerial networking in an emerging market: the case of China", *Strategic Management Journal*, Vol.24, No.13, p.1315.

McDaniel, S. W. and D. L. Kolari (1987), "Marketing strategy implications of the Miles and Snow strategic typology", *Journal of Marketing*, Vol.51, pp.19-30.

Mckee, D. O., P. R. Varadarajan and W. M. Pride (1989), "Strategic adaptability and firm performance: a market contingent perspective", *Journal of Marketing*, Vol. 53, pp.21-35.

Miles, R. E. and C. C. Snow (1978), Organizational strategy, structure and process, *McGraw-Hill*, New York, NY.

Miles, R. E, C. C. Snow, A. D. Meyer, and H. J. Coleman, Jr. (1978), "Organizational strategy, structure, and process", *Academy of Management Review*, Vol. 3 , July, pp.546-562.

Papke-Shields, K. E. and M. K. Malhotra (2001), "Assessing impact of the manufacturing executive's role on business performance through strategic alignment", *Journal of Operations Management*, Vol.19, pp.5-22.

Poon, June M. L., R. A. Aimuddin and S. H. Junit (2006), "Effects of self-concepts traits and entrepreneurial orientation on firm performance",

International Small Business Journal , Vol. 24, No.1, pp.61-82.
Rhee, M. and S. Mehra (2006), "A strategic review of operations and marketing functions in retail banks", *International Journal of Service Industry Management*, Vol. 17, No. 4, pp.364-379.
Sandberg, B. (2007), "Customer-related proactiveness in the radical innovation development process", European Journal of Innovation Management, Vol.10, No.2, pp.252-267.
Sandberg, B. and S. Hansen (2004), "Creating an international market for disruptive innovations", *European Journal of Innovation Management*, Vol. 7, No.1, pp.23-32.
Skinner, W. (1969), "Manufacturing-missing link in corporate strategy", *Harvard Business Review*, May/June, pp.136-45.
SPSS, (1999), SPSS Base 10.0 Applications Guide, *SPSS Inc.*, Chicago, IL.
Sun, H. and C. Hong (2002), "The alignment between manufacturing and business strategies: its influence on business performance", *Technovation*, Vol.22, pp.699-705.
Swamidass, P. M. and W. T. Newell (1987), "Manufacturing strategy, environmental uncertainty and performance: a path analytic model", *Management Science*, Vol. 33, No. 4, pp. 509-525.
Swamidass, P. M., T. Baines and N. Darlow (2001), "The role of manufacturing and marketing managers in strategy development: Lesson from three companies", *International Journal of Operations & Production Management,* Vol. 21, No.7, pp.933-948.
Venkatraman, N. (1989), "The concept of fit in strategy research: toward verbal and statistical correspondence", *Academy of Management Review*, Vol.14, No. 3, pp.423-444.
Venkatraman, N. and V. Ramanujam (1987), "Measurement of Business Economic Performance: An Examination of Method Convergence," Journal of management, Vol.13, No.1, pp.109-122.
Voss, C., (1995), "Alternative paradigms for manufacturing strategy", *International Journal of Operations and Production Management*, Vol. 15, No. 4, pp. 5-16.
Ward, P. T., G. K. Leong and K. K. Boyer (1994), "Manufacturing proactiveness and performance", *Decision Science*, Vol.25, No. 3, pp.337-55.
Wheelwright, S. C. and R. H. Hayes (1985), "Competing through manufacturing", *Harvard Business Review*, January/February, pp. 99-109.
Wikipedia, The Free Encyclopedia, Wikimedia Foundation Inc.

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